REMARKS

The application has been reviewed in light of the Office Action dated May 3, 2007. Claims 1-40 are pending, of which claims 1, 2, 13, 22, 29, 32, 33 and 37 are in independent form.

Claims 29, 30, 37 and 38 were rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 5,803,912 to Siczek et al. Claim 1 was rejected under 35 U.S.C. § 103(a) over Siczek in view of U.S. Patent No. 6,222,904 to Berestov. Claims 2-11, 13, 14, 16-20 and 22-27 were rejected under 35 U.S.C. § 103(a) over Siczek in view of Berestov and further in view of Soo et al., Am. J. Roentgenology (1998) 171: 615-617. Claims 12, 15, 21, and 28 were rejected under 35 U.S.C. § 103(a) over Siczek in view of Berestov and further in view of Soo and further in view of U.S. Patent No. 4,875,478 to Chen. Claims 31 and 40 were rejected under 35 U.S.C. § 103(a) over Siczek and further in view of Chen. Claims 32-36 were rejected under 35 U.S.C. § 103(a) over Siczek in view of Berestov.

Applicants have carefully considered the Examiner's comments and the cited art, and respectfully submit that the claims of record are patentable over the cited art, for at least the following reasons.

This application relates to approaches for using x-ray imaging to control a needle guidance stage. In contrast with prior art use of a pair of coordinates from each of two images, which pairs are then individually subjected to separate parallax corrections, applicants here devised a way to use only one-dimensional information from one image while still using two-dimensional information from another. Applicants devised an approach using (i) two-dimensional information (for example, "pair of coordinates" in claim 1) of an abnormality or

area of interest from a first image of a breast, and (ii) one-dimensional information (for example, "single coordinate" in claim 1) of said abnormality or area of interest from one or more second images of said breast, to control a needle guidance stage for biopsy. Each of independent claims 1, 2, 13, 22, 32 and 33 address such feature, as well as other features.

Siczek, as understood by Applicant, proposes using two-dimensional information from each of two distinct stereotactic images of a breast to determine three-dimensional coordinates of a selected location of interest within said breast. While Siczek contains language that might suggest an observation that one of the dimensions may be the same in the two images before parallax correction (*see* column 14 lines 37-59), Siczek fails to disclose any recognition that some beneficial use may be made of such observation. To the contrary, Siczek proposes to apply a parallax correction procedure to the point identified by both coordinates derived by marking the first image, and to apply a separate parallax correction to both coordinates derived by marking the point in a second image. See column 15 lines 32-55.

Thus, a person of ordinary skill in the art at the time of the invention would have been led by Siczek to use two-dimensional information derived from one stereotactic image and separately derived two-dimensional information from another stereotactic image in order to control a needle for biopsy, as opposed to using only one-dimensional information from one image in a way that beneficially interacts with two-dimensional information derived from another image, as described in this application. Independent pending claims 1, 2, 13, 22 and 32 address this feature in various ways. For example, claim 1 refers in the last subparagraph to the "computer processing ... said single coordinate ... to calculate a three-dimensional position." Claim 2 refers in its penultimate subparagraph to "computer-processing said single coordinate."

Claims 13 and 22 refer to "computer-processing ... the one-dimensional information." Claims 32 and 33 refer to "said computer processing ... said single coordinate."

The other references combined with Siczek in a rejection of these independent claims and their directly or indirectly dependent claims, do not supply the teaching missing from Siczek in this respect. As understood, Berestov was cited in the Office Action as proposing use of a digital x-ray receptor. Soo, pg. 617, col. 2, was cited as proposing a target-on-scout stereotactic system that calculates lesion coordinates from a scout image and a single unobstructed stereo image. Chen col. 4, lines 14-23 was cited in the Office Action as proposing performing mammographic procedures while the upper body of a patient is upright.

Independent claims 29 and 37 are supported by the disclosure of a different feature – how to work with information that defines initial positions of two lines passing through the breast such that the distance between these two lines is reduced to thereby make more accurate the calculation of the 3D position of the lesion or other volume of interest in the breast. The discussion in Siczek, column 10, line 39 through column 11, line 28 appears to be directed to a totally different feature – how to direct the biopsy needs to points OFFSET from the initially calculated point so as to extract biopsy samples not only from the initially targeted lesion but also from volumes nearby. Applicant submits that this discussion in Siczek does not pertain to the "least distance" concept referred to in claims 29, 30, 37 and 38.

Accordingly, for at least the above-stated reasons, Applicant respectfully submits that independent claims 1, 2, 13, 22, 29, 32, 33 and 37, and the claims depending therefrom, are patentable over the cited art.

In view of the remarks above, Applicants submit that the application is in condition for allowance, and solicit allowance.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition. The Patent Office is hereby authorized to charge any fees that are required in connection with this amendment and to credit any overpayment to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Respectfully submitted,

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